USEPA AMCO Superfund Site CAG Meeting, March 29, 2010

EPA Attendees:	Leana Rosetti Steve Calanog
EPA Contractors:	Frankie Burton/CH2M HILL
CAG Members:	Angie May Brian Beveridge Bruce Cox Paul Finley Tori Johnson Ms. Parkinson Phoebe Rossitu John Schweizer/Technical Assistant Vicky Valentine (**Willing to be block captain for Henry Street**) Frank Watson Kathy Webster

EPA West Oakland Residential Lead Assessment

EPA Presentation/Information

Background Information

- Steve Calanog/EPA provided a brief history of the lead assessment (see "Background" slide of Steve Calanog's presentation).
  - **2007:** Lead investigation and removal in yards adjacent to the AMCO NPL Site (Center and 3rd Streets).
    - 8 residential yards
    - 400 ppm Pb Action Level
    - Pb not attributed to historic AMCO/DC Metals operations
  - **August 2009:** Congresswoman Barbara Lee's Office requests EPA to investigate community members concerns of lead levels in the immediate neighborhood.
  - **October 2009:** EPA initiates expanded investigation of lead levels in residential yards.
    - 6 blocks, 150 yards/parcels, 56 yards sampled (96 total sampled collected for lead analysis)
    - Took 5 point samples, which means they sampled five different places around the entire property.
    - Used x-ray fluorescent to test soil.
    - Sampling results: 80% above Preliminary Remediation Goal (PRG) of 400 parts per million (ppm) - 983 ppm average above PRG.
    - See the **EPA West Oakland Residential Lead Assessment Area Map** at the end of the notes for the area EPA sampled and will clean up.
- **What can residents do now?**
  - Monitor children's ingestion of soil.
  - Thoroughly wash or do not eat food grown in lead contaminated soil.
  - See previous notes for more detailed information about preventing lead exposure.
- Steve Calanog/EPA has received approval to begin the lead contaminated soil clean up.

Possible Removal Activities

1. Dig and Haul

- Remove top 18" to 24" of contaminated soil and replace with clean fill and restore yards
- Approximate Cost = $36k per yard ($5.4m)
- Approximate Timeframe = 20 months of work
- Advantages
    - Very reliable means of eliminating risk from Pb contamination
    - Relatively quick
- Disadvantages
    - Cost
    - Moves problem to a landfill
    - Signficant community impacts (traffic, equipment fumes, noise)

2. Phytoremediation/Phytoextraction

- Utilize plants to remove/extract lead from soil
    - Plants' root systems "take-up" lead as a leachate (i.e., liquid)
    - Utilize plants that demonstrate acceptable uptake
- Approximate Cost = Initial cost $5k per yard (i.e., the planting) Long-term O&M costs unknown
- Approximate Timeframe = Multiple years (min. 5 years)
- Advantages
    - In-Situ solution (does not move the problem entirely)
    - Less clean-up pollution
    - Local capabilities
- Disadvantages
    - Time
    - Impacts to individual residents (e.g., they may not be able to use their yard as they would like)

3. Soil Washing

- Excavate soil and transport to a treatment site
- Remove Pb by chemical process
- Return treated soil to yards
- Approximate Cost = $10k - $30k per yard
- Approximate Timeframe = ~ 24 months
- Advantages
    - Reliable method of removing Pb from soil
- Disadvantages
    - Chemical treatment
    - Moderate to heavy impact to community (i.e., traffic)

4. Traditional Capping/"Green" Capping

- Place a barrier over contaminated soils
    - Concrete, asphalt, decomposed granite, or sod and compost
- Approximate Cost = ~ $3k - $6k per yard
- Approximate Timeframes = 20 months
- Advantages
    - Quick fix
    - Relatively inexpensive
    - Local resource utilization
    - Low impacts to community (e.g., traffic)
- Disadvantages
    - Does not address Pb levels

5. Phosphate Immobilization

- Till calcium phosphate into top 18" to 24" creating a Pb-compound which is not bioavailable
- Approximate Cost = ~ $4k - 7k per yard
- Approximate Timeframe = 20 months
- Advantages
    - Reduces/eliminates toxicity of Pb
    - Local resource utilization
    - Low impacts to community (e.g., traffic)
- Disadvantages
    - Lead levels will remain – toxicity is reduced/eliminated

6. Others?

- Combination of remedies
    - "Treat, Lock, and Cover" – Operation Paydirt
        - Phosphate Immobilization and "Green" Capping
        - Approx. Cost = $10k per yard
    - Soil Washing and Phytoextraction
    - Limited Dig and Haul and "Green" Capping
        - Excavate 6" to 12" of contaminated soil and cap

How can you help?

- Provide me feedback on these and other remedies.
- Discuss these ideas with your neighbors.

Steve Calanog/EPA's Thoughts

- While meeting project objectives I would like to select a remedy that is:
    - Cost effective (for everyone concerned – the larger bay area and other places in the US that have lead contaminated soil issues)
    - Is a technology that local resource can deploy in other parts of the City and Community
- Steve Calanog/EPA would like to begin setting up pilot studies

Steve Calanog/EPA's Preference

- "Treat, Lock, and Cover"
    - Pilot test this approach in a few "volunteer" yards (4 – 8 yards) to determine practicability
    - When? June – July
    - Report findings to CAG

Technical Assistant and Community Comments

1. Dig and Haul

- Comments from John Schweizer/Technical Assistant:
    - Advantages: The reliability of this method tends to eliminate any doubt about the cleanliness of the soil, which reflects positively on people's property values.
    - Disadvantages: There must be very good dust control while the soil is being removed. This method involves disturbance of the lead contaminated soil. Contractors are required by law to mitigate the remedial activity appropriately and can get into trouble if they don't. EPA tends to hire high quality contractors who do a good job.
- The residents would like EPA to consider the time of year they chose to perform the removal, because there are certain times of year when the soil is much drier and may cause more dust.
- How many yards does EPA propose to clean up?

    - EPA proposes to clean up 150 yards.
- How far are you going to dig into the soil? Will you reach the contaminated groundwater?
    - EPA will dig 18 – 24 inches deep, which is not nearly deep enough to reach the groundwater. The groundwater under this area of the lead removal is not contaminated by the AMCO Superfund Site.

2. Phytoremediation/Phytoextraction

- Comments from John Schweizer/Technical Assistant:
    - When Steve Calanog/EPA asked John Schweizer/Technical Assistant if he had a dollar amount in mind for maintenance of phytoremediation John Schweizer/Technical Assistant said that he did not, but it is important to remember that part of the maintenance cost goes to local labor. This option would allow EPA to invest in the local economy.
    - Advantages: This option does a good job of preventing children from getting exposed to lead contaminated soil. This option also doubles as a sync for air pollutants, which will help improve the local air quality.
    - Disadvantages: In addition to what Steve Calanog/EPA mentioned there are a few disadvantages…
        - Need to select a plant with roots that are least two feet deep
        - Need to include keylets, or key letting agents, that cause the contamination to become more soluable and more quickly taken up by the plants.
        - This option is somewhat experimental and will basically be a research project for this level of lead contamination clean up in a residential area.
- Are the plants contaminated with lead after they up take the lead in the soil?
    - Yes
- What would happen if the plants are in someone's yard, taking up lead and a child breaks and eats some of the plant?
    - There have not been specific studies for that situation, but it is not ideal.
- Won't this method require maintenance that some property owners and renters may not be willing to participate in?
    - Yes, but that is why property owners must work with the EPA and their contractors closely. Maintenance would only be required under the plant remediation option and EPA is still working the details.
- How will EPA conduct dust control?
    - EPA will implement appropriate mitigation measures to control the dust and will monitor their contractors. They will also request that the public monitor the dust control and report anything suspicious.
- What happens if there is lead contamination under the house?
    - Lead does not move as easily as some chemicals.
- What happens if someone's dog goes under the house on a regular basis?
    - EPA would put up something to prevent dogs, other animals and children from going under the houses and possibly spreading the lead around.
- Will EPA clean up the tree line between the sidewalk and street?
    - Yes, EPA will cleanup all of the tree lines, but they must coordinate with the City of Oakland.
- What happens with vacant lots?
    - EPA would have to work with the owner of the vacant lot to get their permission to clean it up first. If the owner is willing to have their property remediated then EPA will plant the chosen species across the entire yard and will perform the required maintenance until the soil is cleaned up.
- EPA is not getting through to the community, because there are only seven residents out of 150 properties present at this meeting.

    - EPA will work with each individual property owner to pick a remediation option that works for them. The neighborhood as a whole will not make a decision for their neighbors.
    - EPA will also make it clear to residents that chose not to participate that their property will have a deed restriction as long as they do not participate.
    - The reason EPA is having this meeting is to educate the residents and allow them to be involved in the decision making process.
- A resident pointed out that you do not need a lot of people to come up with a lead remediation plan/program. In fact it would slow down the process to involve too many people in the planning process.
- Another resident suggested that each block should have three representatives to help EPA communicate with the residents. Some residents may be more willing to listen to their neighbors than EPA.
    - EPA would need a commitment from 1-3 people per block in order to justify producing and printing information for the residential representatives to distribute. It is important for EPA to get a solid and serious commitment from the residential volunteers.

3. Soil Washing

- Comments from John Schweizer/Technical Assistant:
    - Disadvantages: This option is a disruptive process that is not trivial. It also tends to be more expensive than dig and haul.
- Where would you wash the soil?
    - Somewhere in the neighborhood to reduce costs and air quality impact

4. Capping/"Green" Capping

- Comments from John Schweizer/Technical Assistant:
    - Even with concrete plants and other tings can get through, which could potentially be a problem with lead contaminated soil beneath the cap.
- Will you be able to plant anything in the yard if you get the "green capping"?
    - No you can not plant anything without ruining the protective level.
    - Over the long term there could be issues with unaware residents removing the protective layer.

5. Phosphate Immobilization

- Comments from John Schweizer/Technical Assistant:
    - This option has a lot of the advantages of the phytoremediation (such as community participation), but it is disruptive.
    - Again there is an issue of dust control.
    - In reading the technical papers Steve Calanog/EPA sent John Schweizer/Technical Assistant was convinced that the chemistry is right, that it is stable and will not degrade over time. John Schweizer/Technical Assistant's only concern is it will not convert all the lead into an insoluable form. It will convert approximately 40% of the lead into an insoluable form. He would like to learn more about the details related to this concern.
        - Some of the authors of the papers are willing to come out and talk to Steve Calanog/EPA and John Schweizer/Technical Assistant.
        - The project in New Orleans is the first project using this method (in conjunction with green capping). In New Orleans they are cleaning up the yards of 80,000+ homes. It's about a year into the project.
- The residents would like to have a representative of the neighborhood visit the New Orleans project site who will report back to the rest of the neighborhood.
- Kathy Webster volunteered to visit the New Orleans project site, because she will be in New Orleans on another trip. Steve Calanog/EPA said he would put her in touch with the person that created the program in New Orleans and set up a meeting.

- Is there any way to clean up our yards without disrupting them?
    - No, because you've got to do something with the soil to clean it up.

6. Others?

- A resident reminded EPA not to sound like they will be making the decision for the residents and use more inclusive words like "we" and "us" to engage the community. If EPA does not have a good relationship with the community then they will have better luck getting input.

Misc. questions

- Kathy Webster said she has a lot of suggestions and questions, some of which include the following:
    - Suggest opening up an email forum, having an office/trailer in the neighborhood, what happens with my neighbor, what will happen to my fence, will you replace my fence, can I get a better fence, what about my cats, what about the neighborhood cats, etc.
- A resident suggested that Kathy email all the questions she can think of to Leana Rosetti/EPA so she can work with Steve Calanog/EPA to create a FAQ sheet.
- Is there a map of the proposed effort?
    - Yes it is in Steve Calanog/EPA's power point presentation, which is available on the AMCO Superfund Site Facebook page.
- Does EPA put the agreement in writing to ensure all issues are worked out?
    - EPA will put everything into writing with the aid of their legal department.
- Will the residents be provided their own attorney?
    - EPA will not provide the residents with their own attorney, but they have the right to have one review the contracts between property owners and EPA.
- Will EPA dig up all trees, including really old trees?
    - No they will try to avoid removing as many trees and large shrubs/cactuses as possible.
- A resident requested that EPA prepare a one page fact sheet or FAQ list for the residents to reference when speaking to their neighbors.
    - EPA will get started on that and will send it to the entire mailing list.
- How much time does the community have to educate their neighbors?
    - EPA will begin pilot studies in the summer (June) and the actual remediation will begin in the fall (September).
- The residents in general agreed that the community outreach is not working. They suggested that EPA knock on doors more than once a week to actually speak to the residents. Fact sheets, flyers and emails will get thrown away or deleted, because people are not necessarily aware of the importance of the information. Face to face interaction has a more lasting effect than communicating via written material.
- A resident reminded the other residents that governmental agencies can only do their job; they are not expected to be community organizers.
- The residents suggested picking block captains, because there are a good number of volunteers at this meeting alone that are willing to become block captains.
- A resident suggested that they as a community put pressure on EPA or legislative representatives to get what Leana Rosetti/EPA needs to better do her job educating the public. Leana Rosetti/EPA needs help, because she is only one person and can only do so much. The community can come to her aid and get something done through putting pressure on legislative representatives.
    - The residents agreed that is important to remember and act on.
- The residents would find a map and a one page fact sheet the most useful in helping them educate their neighbors.
- **Another opportunity for the residents to get involved is to volunteer their yard for pilot studies. All interested residents should contact Steve Calanog/EPA!**

    - A resident suggested that those involved in the pilot studies could have a large informational sign educating the public on the purpose of the pilot study.
    - Steve Calanog/EPA ideally wants to display the different options in different yards or vacant lots, which will give residents an opportunity to view the various options in their neighborhood.
- At the next meeting residents should sign up for particular pilot studies, take on block captain roles and otherwise organize themselves.
- The goal is not to go over the same information multiple times when a new resident comes to a meeting.
    - The residents should sponsor new members and bring them up to speed on the information already covered in previous meetings.
    - It may be best for the policy to promote moving forward in meetings rather than constantly getting stuck on previously discussed topics.
    - Repetitive questions could be valued, but put aside to keep moving forward.
- EPA should provide the residents functional reference sheets listing the public health implications of lead exposure for residents to refer to when talking to their neighbors.
- A resident suggested that they discuss holding a block party where they can pass out information and talk to their neighbors about EPA's projects.

Upcoming meetings:

- AMCO Superfund Site CAG Meeting: May 10 6:30 – 8:30 PM
  Mandela Gateway Apartments Community Room located at 1400 7th Street, Oakland.

EPA West Oakland Residential Lead Assessment Area Map

Source: DigitalGlobe, Image date 2009-04-01